

Title (en)

LOW-MANGANESE GAS-SHIELDED FLUX CORED WELDING ELECTRODES

Title (de)

FÜLLDRAHTELEKTRODEN MIT GERINGEM MANGANGEHALT FÜR SCHUTZGASSCHWEISSEN

Title (fr)

ÉLECTRODES DE SOUDAGE À L'ARC AU FIL FOURRÉ SOUS PROTECTION GAZEUSE, À FAIBLE TENEUR EN MANGANÈSE

Publication

**EP 2906389 A4 20160713 (EN)**

Application

**EP 13844720 A 20131004**

Priority

- US 201213647810 A 20121009
- US 2013063387 W 20131004

Abstract (en)

[origin: US2014097168A1] A gas-shielded flux cored welding electrode comprises a ferrous metal sheath and a core within the sheath enclosing core ingredients. The core ingredients and sheath together comprise, in weight percentages based on the total weight of the core ingredients and the sheath: 0.25 to 1.50 manganese; 0.02 to 0.12 carbon; 0.003 to 0.02 boron; 0.2 to 1.5 silicon; 0 to 0.3 molybdenum; at least one of titanium, magnesium, and aluminum, wherein the total content of titanium, magnesium, and aluminum is 0.2 to 2.5; 3 to 12 titanium dioxide; at least one arc stabilizer, where the total content of arc stabilizers is 0.05 to 1.0; no greater than 10 of additional flux system components; remainder iron and incidental impurities.

IPC 8 full level

**B23K 35/02** (2006.01)

CPC (source: CN EP KR RU US)

**B23K 35/0261** (2013.01 - KR); **B23K 35/3026** (2013.01 - CN EP RU US); **B23K 35/3073** (2013.01 - KR);  
**B23K 35/3093** (2013.01 - CN EP KR RU US); **B23K 35/3602** (2013.01 - CN EP KR RU US); **B23K 35/362** (2013.01 - CN EP KR RU US);  
**C22C 38/001** (2013.01 - CN EP RU US); **C22C 38/004** (2013.01 - RU); **C22C 38/02** (2013.01 - CN EP RU US);  
**C22C 38/04** (2013.01 - CN EP US); **C22C 38/14** (2013.01 - CN EP KR RU US)

Citation (search report)

- [X] EP 2374571 A1 20111012 - KOBEL STEEL LTD [JP]
- [I] EP 2289661 A1 20110302 - NIPPON STEEL & SUMIKIN WELDING [JP]
- [I] EP 1769882 A1 20070404 - KOBEL STEEL LTD [JP]
- [I] DATABASE WPI Week 198712, Derwent World Patents Index; AN 1987-082777, XP002758264
- See references of WO 2014058725A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**US 10316395 B2 20190611**; **US 2014097168 A1 20140410**; BR 112015007762 A2 20170704; CA 2886428 A1 20140417;  
CA 2886428 C 20171121; CN 104718048 A 20150617; EP 2906389 A2 20150819; EP 2906389 A4 20160713; JP 2015536242 A 20151221;  
JP 6262240 B2 20180117; KR 20150046351 A 20150429; MX 2015004374 A 20150706; RU 2015112988 A 20161127;  
RU 2622476 C2 20170615; US 11136654 B2 20211005; US 2020024705 A1 20200123; WO 2014058725 A2 20140417;  
WO 2014058725 A3 20141009

DOCDB simple family (application)

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EP 13844720 A 20131004; JP 2015536816 A 20131004; KR 20157008748 A 20131004; MX 2015004374 A 20131004;  
RU 2015112988 A 20131004; US 2013063387 W 20131004; US 201916400420 A 20190501